

ABSTRACT

The invention is directed to a system for dynamically correcting an electromagnetic wave by processing two or more aspects of the electromagnetic wave along two or more separate signal paths; comparing an expected value for at least one of the aspects of the electromagnetic wave with an actual value for the aspect of the electromagnetic wave to generate a correction signal; and applying the correction signal to at least one other aspect of the electromagnetic wave. The aspects of the electromagnetic wave to be processed may be amplitude and phase, where the comparison may be along the phase path and the adjustment along an analog portion of the amplitude path. A digital phase locked loop may be used for the comparison and to generate the correction signal; and a bank of pipeline registers may be used to adjust the amplitude path.